

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Previously Presented) The piezoelectric actuator as claimed in claim 16, wherein the piezo stack comprises piezoelectric ceramic.
3. (Previously Presented) The piezoelectric actuator as claimed in claim 16, wherein the actuator top and the actuator bottom are arranged equidistant from each other.
4. (Previously Presented) The piezoelectric actuator as claimed in claim 16, wherein the material of the housing shell is at least largely resistant to the media flowing around it.
5. (Currently Amended) The piezoelectric actuator as claimed in claim 16, wherein an [[the]] inside volume of the actuator housing is substantially gas-free.

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3. (Previously Presented) The piezoelectric actuator as claimed in claim 16, wherein the actuator top and the actuator bottom are arranged equidistant from each other.
4. (Previously Presented) The piezoelectric actuator as claimed in claim 16, wherein the material of the housing shell is at least largely resistant to the media flowing around it.
5. (Currently Amended) The piezoelectric actuator as claimed in claim 16, wherein an [[the]] inside volume of the actuator housing is substantially gas-free.

6. **(Previously Presented)** The piezoelectric actuator as claimed in claim 16, wherein viscosity of the isolating medium corresponds approximately to viscosity of the flowing media.

7. **(Previously Presented)** The piezoelectric actuator as claimed in claim 16, wherein the material of the housing shell is electrically neutral.

8. **(Previously Presented)** The piezoelectric actuator as claimed in claim 16, wherein the actuator top and the actuator bottom have a different cross-sectional area.

9. **(Previously Presented)** The piezoelectric actuator as claimed in claim 16, wherein the isolating material is a silicone oil.

10. **(Previously Presented)** The piezoelectric actuator as claimed in claim 16, wherein thermal conductivity of the isolating material is equal to or greater than thermal conductivity of the material of the piezo stack.

11. **(Currently Amended)** The piezoelectric actuator as claimed in claim 16, wherein at ~~lest~~ least one of the actuator top and the actuator bottom have a cross-sectional area which respectively corresponds to the assigned active surface of the piezo stack, arranged transversely to the main direction of extent of the piezo stack.

12. (Previously Presented) The piezoelectric actuator as claimed in claim 16, wherein at least one of the actuator top and the actuator bottom have at least two terminating regions, electrically insulated from each other, for the electrical connecting lines of the piezo stack.

13. (Previously Presented) The use of a piezoelectric actuator as claimed in claim 16 for an injection valve of an internal combustion engine.

14. (Previously Presented) The use of a piezoelectric actuator as claimed in claim 16 for a proportional valve.

15. (Previously Presented) The use of a piezoelectric actuator as claimed in claim 16 for a sonotrode.

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16. (Currently Amended) A piezoelectric actuator for insertion in a flowing media, comprising:

a piezo stack having a top active main surface and a bottom active main surface;

deformable isolating material in direct contact with at least portions of said piezo stack;

actuator housing enclosing said isolating material, said housing having a non-rigid housing shell and a dimensionally stable actuator top arranged on the top active main surface of the piezo stack and dimensionally stable actuator bottom arranged on said bottom active main surface of the piezo stack;

electrical connection lines extending from said piezo stack through said actuator housing by means of at least one of said dimensionally stable actuator top and actuator bottom wherein said housing shell is disposed at a distance from piezo stack at all pointer, and a length of the housing shell, when measured along a surface line, corresponds to at least a maximum extend of the piezo stack or the housing shell is able to be stretched to the maximum extent of the piezo stack, wherein the isolating material is one of an electrically insulating fluid and gel, wherein an inside volume of the housing is substantially filled with said isolating material, and wherein the housing shell and the dimensionally stable actuator bottom and the dimensionally stable actuator top are connected to each other in a sealed manner with respect to the isolating material and the flowing media.

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~~17~~ (Previously Presented) The piezoelectric actuator as claimed in claim 5, wherein the media is fuel.

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~~18~~ (Previously Presented) The piezoelectric actuator as claimed in claim 13, wherein the internal combustion engine is one of a gasoline and diesel engine.

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~~19~~ (New) The piezoelectric activator as claimed in claim ~~16~~, wherein the material of the housing shell is at least largely resistant to the media flowing therearound, an inside volume of the actuator housing is substantially gas-free,

viscosity of the isolating medium corresponds approximately to the flowing media, the housing shell material is electrically neutral, and thermal conductivity of the isolating material is at least equal to that of the piezo stack material.

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~~20~~ (New) The piezoelectric actuator as claimed in claim 16, wherein the non-rigid shell is fabricated from a limp or elastic material.